

### **REMARKS**

The claims pending in this application are claims 1 – 13. No claims have been canceled.

Claims 1, 7 and 10 have been amended to add the limitation that the crumb rubber must be present in an amount of from 5 to 100 pounds per barrel of drilling fluid. Support for this amendment can be found at paragraph 30.

Claim 8 has been amended to correct the typographical error noted by the examiner.

Claims 6 and 9 have been amended to reflect that the particles will be 140% of their original size disclosed at paragraph 19.

Claim 9 has been amended to depend from claim 7.

Finally, paragraph 0018 has been deleted from the specification.

### **THE DECLARATION**

The examiner called for the submission of a new declaration in that the present declaration fails to list the citizenship of the inventor. Enclosed please find a substitute declaration.

### **THE ART REJECTION - §102 REJECTION**

#### **1. Knapp**

In the action, the examiner rejected the pending claims under 35 USC §102 as anticipated by the Knapp reference.

Applicant submits that the claims as amended are not anticipated by Knapp. As amended, the claims call for the crumb rubber to be present in an amount of from 5 to 100 particles per barrel. Knapp is silent as to the amount of elastone which can be used. Thus, Knapp fails to teach or disclose all the elements of the claims and does not anticipate the claims.

2. Brothers, et al.

The examiner next rejected claims 1, 3 and 6 as anticipated under 35 USC §102(a) by the Brothers, et al. patent.

Like the Knapp patent, Brothers, et al. fails to teach the amount of crumb rubber now recited in the claims. Thus, it does not anticipate the claims.

3. Wood

The examiner rejected claims 1 – 13 under 35 USC §102(b) as anticipated by Wood. Applicants respectfully traverse this rejection.

Wood teaches the use of crumb rubber particles with a size of up to 400 microns. The presents call for a micron particle size of 425 microns. Thus, Wood does not teach the claimed particle size. This failure to teach each and every element of a claim prevents Wood from anticipating the claims.

4. Benko

The examiner has rejected claims 1, 3 and 6 under 35 USC §102(b).

Again, Benko is silent about the amounts of elastomer which can be used to prevent fluid loss, let alone teach the use of from 5 to 100 pounds per barrel as now required by the claims. Thus, Benko does not anticipate the pending claims.

**ART REJECTION - §103**

1. Knapp in view of Delhommer, et al. and Sheeler

The examiner has rejected claims 1 – 2, 4 – 5, 10 and 12 under 35 USC §103(a) as unpatentable over Knapp in view of Delhommer, et al. and Sheeler.

As noted above, Knapp fails to teach the amounts of rubber now called for in the claims. The teachings of Delhommer and Sheeler likewise do not address the amount which

should be used. Even in combination, these references fail to teach or suggest the present invention.

2. Wood in view of Knapp

The examiner has rejected claims 1 – 13 under 35 USC §103(a) as unpatentable over Wood in view of Knapp. Applicant respectfully traverses this rejection.

Wood teaches the use of crumb rubber particles with a size of up to 400 microns. While the examiner is correct in his evaluation of the MPEP, he ignores the plain teaching of Wood which is to use small (<400 micron particles) rather than large particles (See paragraph 19). This is confirmed by the arguments made by Wood in the prosecution of his prior application when he specifically argued that his invention was directed to particles of less than 400 microns (See Ex. A.) *See, ArthroCare Corp. v. Smith & Nephew, Inc.* 406 F.3d 1365, 1371 (Fed. Cir. 2005) (Prosecution history consulted to determine teachings of a reference.) This is a clear teaching of the patent and its prosecution history away from the use of larger particle sizes. This rebuts the examiner's case of prima facie obviousness.

Moreover, the teaching again from using larger particles would be teach one skilled in the art away from combining Wood with Knapp as suggested by the examiner.

Thus, Wood, either alone in view of Knapp, does not render the present claim obvious.

**OBVIOUSNESS DOUBLE PATENTING**

The examiner has rejected claims 1 – 13 under the judicially created doctrine of obviousness type double patenting. Applicant hereby submits a terminal disclaimer to obviate this rejection.

**CONCLUSION**

In view of the above amendment, applicant believes the pending application is in condition for allowance.

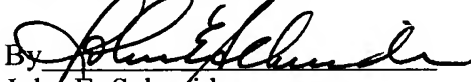
Application No. 10/719,795  
Amendment dated December 27, 2005  
Reply to Office Action of September 27, 2005

Docket No.: HO-P02901US1

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2375, under Order No. HO-P02901US1 from which the undersigned is authorized to draw.

Dated: December 27, 2005

Respectfully submitted,

By 

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EU186312751US, in an envelope addressed to: Box Non-Fee Amendment, Commissioner for Patents, Washington, DC 20231, on the date shown below.

Dated: July 11, 2002

Signature

(Monica L. Thomas)

Docket No.: HO-P02056US1  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Robert R. Wood

Application No.: 09/767,352

Group Art Unit: N/A

Filed: January 23, 2001

Examiner: Not Yet Assigned

For: IMPROVED DRILLING FLUIDS

**AMENDMENT UNDER 37 C.F.R. § 1.111**

**Box Non-Fee Amendment**  
Commissioner for Patents  
Washington, DC 20231

Dear Sir:

In response to the Office Action dated April 30, 2002 (Paper No. 13), please enter the following amendment and consider the remarks which follow.

**In the Claims**

15. (Amended)      A method of reducing lost circulation and well comprising:
- (a)    preparing a pill of crumb rubber particles and a hydrocarbon fluid, said crumb rubber particles having a diameter of from 1 to 400 microns;
  - (b)    injecting said pill into said well; and
  - (c)    forcing said pill into a lost circulation zone.

Please cancel claim 16.

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**REMARKS/ARGUMENTS**

The above amendment incorporates the size limitations of claim 10 into independent claim 15. Support for the amendment is found at page 7. The claims now pending are claims 1, 2, 6-11, 13-15, 18-20.

In the official Action the Examiner rejected claim 15 under 35 U.S.C. § 102(a) as anticipated by either Fisher ('233) or Sheeler ('908). The Examiner next requested claims 1, 2, 3-7, 9-11, 13-16 and 18-20 under 35 U.S.C. § 103(a) as unpatentable over Fisher, Sheeler or Kirk Othmer.

The Examiner indicated that claim 8 would be allowed if written in independent form.

Applicant respectfully submits that the claims as amended, are patentable and respectfully traverse the rejection.

**ANTICIPATION**

Claim 15 has now been amended to require that the crumb rubber particles have a diameter of from 1 to 400 microns. Neither Sheeler nor Fisher teach the use of particles with the required diameter. Thus, as amended, Claim 15 is not anticipated by either Fisher or Sheeler.

**OBVIOUSNESS**

The Examiner next suggests that while none of the cited references, Fisher, Sheeler or Kirk Othmer teach the use of particles with the requisite diameter, it would have been obvious to optimize the particular size of the crumb rubber to produce the present invention. Applicant respectfully traverses this rejection.

The Examiner's suggestion ignores the plain teaching of at least two of the cited references. For example, in Sheeler at column 2, lines 35-38 it teaches that the preferred size is ¼ to "3" (>6, 350 microm) and that rubberized fibers less than ¼" "fail to form an effective sealing mat."

This is teaching away from their range required by the claim.

Similarly, in Kirk Othmer, it teaches the use of granular ground tires with a particle size of at least 4 mesh or greater particle ( $> \frac{1}{4}$ "). Moreover, Kirk Othmer teaches the desirability of using larger particles, not smaller particles. There is no teaching or suggestion to use smaller particles.

Thus, the only claim teaching in the act is away from the present invention.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2375, under Order No. HO-P02056US1 from which the undersigned is authorized to draw.

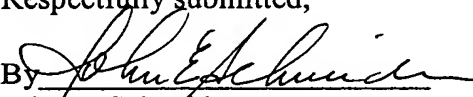
#### CONCLUSION

Applicant submits that the claim, as amended, are free of the art and in for allowance.

A prompt and favorable response is earnestly solicited.

Dated: July 11, 2002

Respectfully submitted,

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**Version With Markings to Show Changes Made**

15. (Amended) A method of reducing lost circulation [in a well] and well comprising:

- (a) preparing a pill of [crosslinked] crumb rubber particles and a hydrocarbon fluid, said crumb rubber particles having a diameter of from 1 to 400 microns;
- (b) injecting said pill into said well; and
- (c ) forcing said pill into a lost circulation zone.

Please cancel claim 16.



**Clean Version of Amended Claims**

1. A drilling fluid additive comprising crumb rubber particles, said particles having a diameter of from 1 to 400 microns, and a hydrocarbon fluid.
2. The drilling fluid additive of claim 1 wherein said crumb rubber particles vary in size from 20 to 400 microns.
3. Canceled.
4. Canceled.
5. Canceled.
6. The drilling fluid additive of claim 1 wherein said crumb rubber particle has a density of from 8.5 to 10.5 ppg.
7. The drilling fluid additive of claim 1 wherein said hydrocarbon fluid is selected from the group consisting of crude oil, diesel oil, kerosene, mineral oil, gasoline, naphtha, toluene, ethylenedichloride, synthetic oils and mixtures thereof.
8. The drilling fluid additive of claim 1 further comprising cellulose fiber.
9. The drilling fluid additive of claim 1 wherein said hydrocarbon fluid is diesel oil.
10. The drilling fluid additive of claim 1 wherein such crumb rubber is capable of expanding to at least 40% of its original size upon exposure to hydrocarbon fluids.
11. A drilling fluid additive for reducing lost circulation of drilling fluids comprising:
  - (a) crumb rubber particles capable of expanding upon exposure to heat, said particles having a diameter of from 1 to 400 microns; and

(b) a hydrocarbon fluid.

12. Canceled.

13. The drilling fluid additive of claim 11 wherein said crumb rubber particles have a density of from 8.5 to 10.5 ppg.

14. The drilling fluid additive of claim 11 wherein said crumb rubber particles are capable of expanding at least 40% of their original size upon exposure to a hydrocarbon fluid.

15. A method of reducing lost circulation and well comprising:

(a) preparing a pill of crumb rubber particles and a hydrocarbon fluid, said crumb rubber particles having a diameter of from 1 to 400 microns;

(b) injecting said pill into said well; and

(c) forcing said pill into a lost circulation zone.

16. Canceled.

17. Canceled.

18. The method of claim 15 wherein the crumb rubber has particles varying in size from 20 to 400 microns.

19. The method of claim 15 wherein said hydrocarbon fluid is selected from the group consisting of crude oil, diesel oil, kerosene, mineral oil, gasoline, naphtha, toluene, ethylenedichloride and mixtures thereof.

20. The method of claim 15 wherein said hydrocarbon fluid comprises diesel oil.